

CRF Processing Date: 7/11/2002
 Edited by:
 Verified by: (STIC staff)

Serial Number: 09/765,555

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☒ Deleted ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____

TECH CENTER 1600/2900

JUL 15 2002

RECEIVED



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/765,555

DATE: 07/11/2002

TIME: 08:11:35

Input Set : N:\AMC\27801-20014.txt

Output Set: N:\CRF3\07112002\I765555.raw

```

3 <110> APPLICANT: The Scripps Research Institute
5 <120> TITLE OF INVENTION: Methods and compositions to modulate
6   expression in plants
8 <130> FILE REFERENCE: 27801-20014.40
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/765,555
C--> 11 <141> CURRENT FILING DATE: 2002-05-24
13 <150> PRIOR APPLICATION NUMBER: US 09/620,897
14 <151> PRIOR FILING DATE: 2000-01-21
16 <150> PRIOR APPLICATION NUMBER: US 60/177,468
17 <151> PRIOR FILING DATE: 2000-01-21
19 <160> NUMBER OF SEQ ID NOS: 75
21 <170> SOFTWARE: FastSEQ for Windows Version 4.0
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 532
25 <212> TYPE: DNA
26 <213> ORGANISM: Artificial Sequence
28 <220> FEATURE:
29 <223> OTHER INFORMATION: Promoter CsVMV
31 <400> SEQUENCE: 1
32 tctagaaact agcttccaga aggtaattat ccaagatgta gcatcaagaa tccaatgttt      60
33 acgggaaaaa ctatggaagt attatgtgag ctcagcaaga agcagatcaa tatgcggcac      120
34 atatgcaacc tatgttcaaa aatgaagaat gtacagatac aagatcctat actgccagaa      180
35 tacgaagaag aatacgtaga aattgaaaaa gaagaaccag gcgaagaaaa gaatcttgaa      240
36 gacgtaagca ctgacgacaa caatgaaaag aagaagataa ggtcgggtgat tgtgaaagag      300
37 acatagagga cacatgtaag gtggaaaaatg taaggcgcgga aagtaacctt atcacaaagg      360
38 aatcttatcc cccactactt atccttttat atttttccgt gtcatttttg cccttgagtt      420
39 ttcctatata aggaaccaag ttcggcattt gtgaaaacaa gaaaaaattt ggtgtaagct      480
40 attttctttg aagtactgag gatacaactt cagagaaatt tgtaagtttg ta      532
42 <210> SEQ ID NO: 2
43 <211> LENGTH: 18
44 <212> TYPE: DNA
45 <213> ORGANISM: Artificial Sequence
47 <220> FEATURE:
48 <223> OTHER INFORMATION: Zinc finger protein 2C7 binding site
50 <400> SEQUENCE: 2
51 gcgtgggcgg cgtgggcg      18
53 <210> SEQ ID NO: 3
54 <211> LENGTH: 51
55 <212> TYPE: DNA
56 <213> ORGANISM: Artificial Sequence
58 <220> FEATURE:
59 <223> OTHER INFORMATION: Promoter pc7rbTATA
61 <400> SEQUENCE: 3

```

RAW SEQUENCE LISTING

DATE: 07/11/2002

PATENT APPLICATION: US/09/765,555

TIME: 08:11:35

Input Set : N:\AMC\27801-20014.txt

Output Set: N:\CRF3\07112002\I765555.raw

```

62 cccgggtata taataagctt ggcattccgg tactgttggg aaagccacca t 51
64 <210> SEQ ID NO: 4
65 <211> LENGTH: 3121
66 <212> TYPE: DNA
67 <213> ORGANISM: Artificial Sequence
69 <220> FEATURE:
70 <223> OTHER INFORMATION: pND3008 coding region
72 <400> SEQUENCE: 4
73 agcgtgaccc ggtcgtgccc ctctctagag ataatgagca ttgcatgtct aagttataaa 60
74 aaattaccac atattttttt tgtcacactt gtttgaagtg cagtttatct atctttatac 120
75 atatatatta actttactct acgaataata taatctatag tactacaata atatcagtgt 180
76 tttagagaat catataaatg aacagttaga catggtctaa aggacaattg agtattttga 240
77 caacaggact ctacagtttt atcttttttag tgtgcatgtg ttctcctttt tttttgcaaa 300
78 tagcttcacc tatataatac ttcatccatt ttattagtag atccatttag ggtttagggt 360
79 taatggtttt tatagactaa ttttttttag acatctatct tattctatct tagcctctaa 420
80 attaagaaaa ctaaaactct atttttagtt ttttatttaa taatttagat ataaaataga 480
81 ataaaataaa gtgactaaaa attaaacaaa taccctttta gaaattaaaa aaactaagga 540
82 aacatttttc ttgtttcgag tagataatgc cagcctgtta aacgccgtcg acgagtctaa 600
83 cggacaccaa ccagcgaacc agcagcgtcg cgtcgggcca agcgaagcag acggcacggc 660
84 atctctgtcg ctgcctctgg acccctctcg agagtccgc tccaccgttg gacttgctcc 720
85 gctgtcggca tccagaaatt gcgtggcgga gcggcgagcg tgagccggca cggcaggcgg 780
86 cctcctctc ctctcacggc acggcagcta cgggggatcc ctttcccacc gctccttcgc 840
87 tttcccttcc tcgcccggcg taataaatag acacccccct cacaccctct tttcccacc 900
88 tcgtgttgtt cggagcgcac acacacacaa ccagatctcc cccaaatcca cccgtcggca 960
89 cctccgcttc aaggtacgcc gctcgtcctc cccccccccc cctctctacc ttctctagat 1020
90 cggcgcttcg gtccatggtt agggcccggg agttctactt ctgttcatgt ttgtgttaga 1080
91 tccgtgtttg tgtagatcc gtgctgctag cgttcgtaca cggatgacgac ctgtacgtca 1140
92 gacacgttct gattgctaac ttgccagtgt ttctcttttg ggaatcctgg gatggctcta 1200
93 gccgttcgcg agacgggacg gatttcatga ttttttttgt ttctgtgcat aggggttggt 1260
94 ttgccctttt cctttatttc aatatatgcc gtgcacttgt ttgtcgggtc atcttttcat 1320
95 gctttttttt gtcttggttg tgatgatgtg gtctgggttg gcggtcgttc tagatcggag 1380
96 tagaattctg tttcaacta cctggtggat ttattaattt tggatctgta tgtgtgtgcc 1440
97 atacatatct atagttacga attgaagatg atggatggaa atatcgatct aggataggta 1500
98 tacatgttga tgcgggtttt actgatgcat atacagagat gctttttgtt cgcttggttg 1560
99 tgatgatgtg gtgtggttg gcggtcgttc attcgttcta gatcggagta gaatactgtt 1620
100 tcaaaactacc tgggtgtattt attaatattg gaactgtatg tgtgtgtcat acatcttcat 1680
101 agttacgagt ttaagatgga tggaaatata gatctaggat aggtatacat gttgatgtgg 1740
102 gttttactga tgcataata tgatggcata tgcagcatct attcatatgc tctaaccctg 1800
103 agtacctatc tattataata aacaagtatg ttttataatt attttgatct tgatatactt 1860
104 ggatgatggc atatgcagca gctatatgtg gattttttta gccctgcctt catacgtat 1920
105 ttatttgctt ggtactgtt cttttgtcga tgcctaccct gttgttttgt gttacttctg 1980
106 caggtcgact ctagaggatc tatggcccag gcggccctcg agctccccta tgcttgcctt 2040
107 gtcgagtcct gcgacgccc cttttctaag tcggctgata tgaagcgcca tatccgcata 2100
108 cacacaggcc agaagccctt ccagtgtcga atatgcatgc gtaacttcag tcgtagtgc 2160
109 caccttacca cccacatccg caccacacaa ggcgagaagc cttttgcctg tgacatttgt 2220
110 gggaggaagt ttgccaggag tgatgaacgc aagaggcata ccaaaatcca taccggtgag 2280
111 aagccctatg cttgccctgt cgagtcctgc gatcgccgct tttctaagtc ggctgatctg 2340
112 aagcgccata tccgcatcca cacaggccag aagcccttcc agtgtogaat atgcatgcgt 2400
113 aacttcagtc gtagtgacca cttaccacc cacatccgca cccacacagg cgagaagcct 2460

```

RAW SEQUENCE LISTING

DATE: 07/11/2002

PATENT APPLICATION: US/09/765,555

TIME: 08:11:35

Input Set : N:\AMC\27801-20014.txt

Output Set: N:\CRF3\07112002\I765555.raw

```

114 tttgcctgtg acatttgtgg gaggaagttt gccaggagtg atgaacgcaa gaggcataacc 2520
115 aaaatccatt taagacagaa ggactctaga actagtggcc aggcgggcca ggctagccc 2580
116 aaaaagaaac gcaaagttgg gcgcgccgac gcgctggacg atttcgatct cgacatgctg 2640
117 ggttctgatg ccctcgatga ctttgacctg gatatgttgg gaagcgacgc attggatgac 2700
118 ttgatctgg acatgctcgg ctccgatgct ctggacgatt tcgatctcga tatgttaatt 2760
119 aactaccggt acgacgttcc ggactacgct tcttgagaat tcgcggcgcc gggcccgagc 2820
120 ctaggggagga gctcaagatc ccccgaaatt ccccgatcgt tcaaacattt ggcaataaag 2880
121 tttcttaaga ttgaatcctg ttgccggtct tgcgatgatt atcatctaat ttctgttgaa 2940
122 ttacgttaag catgtaataa ttaacatgta atgcatgacg ttatttatga gatgggtttt 3000
123 tatgattaga gtcccgcgat tatacattta atacgcgata gaaaacaaaa tatagcgcgc 3060
124 aaactaggat aaattatcgc gcgcggtgtc atctatgtta ctagatccgg gaattgggta 3120
125 c 3121
127 <210> SEQ ID NO: 5
128 <211> LENGTH: 3069
129 <212> TYPE: DNA
130 <213> ORGANISM: Artificial Sequence
132 <220> FEATURE:
133 <223> OTHER INFORMATION: pND3018 coding region
135 <400> SEQUENCE: 5
136 agcgtgaccc ggtcgtgccc ctctctagag ataatgagca ttgcatgtct aagttataaa 60
137 aaattaccac atattttttt tgtcacactt gtttgaagtg cagtttatct atctttatac 120
138 atatatttta actttactct acgaataata taatctatag tactacaata atatcagtgt 180
139 tttagagaat catataaatg aacagttaga catggtctaa aggacaattg agtattttga 240
140 caacaggact ctacagtttt atcttttttag tgtgcatgtg ttctcctttt tttttgcaaa 300
141 tagcttcacc tatataatac ttcatccatt ttattagtac atccatttag ggtttagggt 360
142 taatgggttt tatagactaa tttttttagt acatctattt tattctattt tagcctctaa 420
143 attaagaaaa ctaaaactct atttttagtt ttttatttaa taatttagat ataaaataga 480
144 ataaaataaa gtgactaaaa attaaacaaa taccctttta gaaattaaaa aaactaagga 540
145 aacatttttc ttgtttcgag tagataatgc cagcctgtta aacgcgctcg acgagtctaa 600
146 cggacaccaa ccagcgaacc agcagcgtcg cgctcgggcca agcgaagcag acggcacggc 660
147 atctctgtcg ctgcctctgg acccctctcg agagtccgc tccaccgttg gacttgctcc 720
148 gctgtcggca tccagaaatt gcgtggcgga gcggcagacg tgagccggca cggcaggcgg 780
149 cctcctctc ctctcacggc acggcagcta cgggggattc ctttcccacc gctccttcgc 840
150 tttcccctcc tcgcccgcgc taataaatag acaccccctc cacaccctct tcccccaacc 900
151 tcgtgttggt cggagcgcac acacacacaa ccagatctcc cccaaatcca cccgtcggca 960
152 cctccgcttc aaggtacgcc gctcgtctc cccccccccc cctctctacc ttctctagat 1020
153 cggcgttccg gtccatggtt agggcccggg agttctactt ctgttcatgt ttgtgttaga 1080
154 tccgtgtttg tgtagatcc gtgctgctag cgttcgtaca cggatgogac ctgtacgtca 1140
155 gacacgttct gattgctaac ttgccagtgt ttctcttttg ggaatcctgg gatggtctta 1200
156 gccgttccgc agacgggatc gatttcatga ttttttttgg ttcgttgcat agggtttggg 1260
157 ttgccctttt cctttatttc aatatatgcc gtgcaattgt ttgtcgggtc atcttttcat 1320
158 gctttttttt gtcttggttg tgatgatgtg gtctgggttg gcggtcgttc tagatcggag 1380
159 tagaattctg tttcaaaacta cctggtggat ttattaattt tggatctgta tgtgtgtgcc 1440
160 atacatattc atagttacga attgaagatg atggatggaa atatcgatct aggataggta 1500
161 tacatgttga tgcgggtttt actgatgcat atacagagat gctttttgtt cgcttggttg 1560
162 tgatgatgtg gtgtggttgg gcggtcgttc attcgttcta gatcggagta gaatactgtt 1620
163 tcaaactacc tgggtgtattt attaaatttg gaactgtatg tgtgtgtcat acatcttcat 1680
164 agttacagat ttaagatgga tggaaatata gatctaggat aggtatacat gttgatgtgg 1740
165 gttttactga tgcataatac tgatggcata tgcagcatct attcatatgc tctaaccttg 1800

```

RAW SEQUENCE LISTING

DATE: 07/11/2002

PATENT APPLICATION: US/09/765,555

TIME: 08:11:35

Input Set : N:\AMC\27801-20014.txt

Output Set: N:\CRF3\07112002\I765555.raw

```

166 agtacctatc tattataata aacaagtatg ttttataatt attttgatct tgatatactt 1860
167 ggatgatggc atatgcagca gctatatgtg gattttttta gccctgcctt catacgctat 1920
168 ttatttgctt ggtactgttt cttttgtcga tgctcaccct gttgtttggt gttacttctg 1980
169 caggtcgact ctagaggatc cactagttag ccatgggcta gcatggccgc tgccgtgcgc 2040
170 atgaacatcc agatgctgct cgaagccgct gattatcttg aacgccggga gcgcgaagcc 2100
171 gagcacggct acgccagcat gctgccatat ccgaaaaaga aacgcaaggc ggcccaggcg 2160
172 gccctcgagc tcccctatgc ttgccctgtc gagtcctgcg atcgccgctt ttctaagtcg 2220
173 gctgatctga agcgccatat ccgcatccac acaggccaga agcccttcca gtgtcgaata 2280
174 tgcatgcgta acttcagtcg tagtgaccac cttaccaccc acatccgcac ccacacaggc 2340
175 gagaagcctt ttgcctgtga catttgtggg aggaagtttg ccaggagtga tgaacgcaag 2400
176 aggcatacca aaatccatac cggtgagaag ccctatgctt gccctgtcga gtccctgcgat 2460
177 cgccgctttt ctaagtcggc tgatctgaag cgccatatcc gcatccacac aggccagaag 2520
178 cccttccagt gtcgaatatg catgcgtaac ttcagtcgta gtgaccacct taccacccac 2580
179 atccgcaccc acacaggcga gaagcctttt gcctgtgaca tttgtgggag gaagtttgcc 2640
180 aggagtgatg aacgcaagag gcataccaaa atccatttaa gacagaagga ctctagaact 2700
181 agtggccagg ccggccagta ccgtaacgac gttccggact acgcttcttg aaagcttggt 2760
182 accgagctcg gatccccga atttccccga tcgttcaaac atttggcaat aaagtttctt 2820
183 aagattgaat cctgttgccg gtcttgcgat gattatcatc taatttctgt tgaattacgt 2880
184 taagcatgta ataattaaca tgtaatgcat gacgttattt atgagatggg tttttatgat 2940
185 tagagtcccg caattataca tttaatagc gatagaaaac aaaatatagc gcgcaacta 3000
186 ggataaatta tcgcgcgcgg tgtcatctat gttactagat ccgggaattc cggaccggta 3060
187 ccagcggcc 3069

```

189 <210> SEQ ID NO: 6

190 <211> LENGTH: 156

191 <212> TYPE: DNA

192 <213> ORGANISM: Artificial Sequence

194 <220> FEATURE:

195 <223> OTHER INFORMATION: 6X2C7 binding site

197 <400> SEQUENCE: 6

```

198 cgtgctagcg cgtgggcggc gtgggcgaac aagcgtgggc ggcgtgggcg aacaagcgtg 60

```

```

199 ggcggcgtgg gcgactagtg ctagcgcgtg ggcggcgtgg gcgaacaagc gtgggcggcg 120

```

```

200 tgggcgaaca agcgtgggcg gcgtgggcga ctagtg 156

```

202 <210> SEQ ID NO: 7

203 <211> LENGTH: 18

204 <212> TYPE: DNA

205 <213> ORGANISM: Artificial Sequence

207 <220> FEATURE:

208 <223> OTHER INFORMATION: ZFPap3

210 <400> SEQUENCE: 7

```

211 gatggagttg aagaagta 18

```

213 <210> SEQ ID NO: 8

214 <211> LENGTH: 21

215 <212> TYPE: DNA

216 <213> ORGANISM: Artificial Sequence

218 <220> FEATURE:

219 <223> OTHER INFORMATION: ZFP from -85 to -65

221 <400> SEQUENCE: 8

```

222 gcctccttcc tcctctcact c 21

```

224 <210> SEQ ID NO: 9

RAW SEQUENCE LISTING

DATE: 07/11/2002

PATENT APPLICATION: US/09/765,555

TIME: 08:11:35

Input Set : N:\AMC\27801-20014.txt

Output Set: N:\CRF3\07112002\I765555.raw

```

225 <211> LENGTH: 18
226 <212> TYPE: DNA
227 <213> ORGANISM: Artificial Sequence
229 <220> FEATURE:
230 <223> OTHER INFORMATION: ZFPm1 from -68 to -85
232 <400> SEQUENCE: 9
233 tgagaggagg aaggaggc 18
235 <210> SEQ ID NO: 10
236 <211> LENGTH: 18
237 <212> TYPE: DNA
238 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
241 <223> OTHER INFORMATION: ZFPm2 from -65 to -82
243 <400> SEQUENCE: 10
244 gagtgagagg aggaagga 18
246 <210> SEQ ID NO: 11
247 <211> LENGTH: 24
248 <212> TYPE: DNA
249 <213> ORGANISM: Artificial Sequence
251 <220> FEATURE:
252 <223> OTHER INFORMATION: ZFP from 294 to 317
254 <400> SEQUENCE: 11
255 gccaaactact acggctccct cacc 24
257 <210> SEQ ID NO: 12
258 <211> LENGTH: 18
259 <212> TYPE: DNA
260 <213> ORGANISM: Artificial Sequence
262 <220> FEATURE:
263 <223> OTHER INFORMATION: ZFPm3 from 311 to 294
265 <400> SEQUENCE: 12
266 ggagccgtag tagttggc 18
268 <210> SEQ ID NO: 13
269 <211> LENGTH: 18
270 <212> TYPE: DNA
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: ZFPm4 from 317 to 300
276 <400> SEQUENCE: 13
277 ggtgagggag ccgtagta 18
279 <210> SEQ ID NO: 14
280 <211> LENGTH: 3300
281 <212> TYPE: DNA
282 <213> ORGANISM: Artificial Sequence
284 <220> FEATURE:
285 <223> OTHER INFORMATION: Partial sequence of pMal-m1 and zinc finger
286 protein ZFPm1
288 <400> SEQUENCE: 14
289 ccgacacccat cgaatggtgc aaaacctttc gcggtatggc atgatagcgc ccggaagaga 60
290 gtcaattcag ggtggtgaat gtgaaaccag taacgttata cgatgtcgca gagtatgccg 120

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/765,555

DATE: 07/11/2002

TIME: 08:11:36

Input Set : N:\AMC\27801-20014.txt

Output Set: N:\CRF3\07112002\I765555.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1099 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:52